

What is claimed is:

1. An isolated nucleic acid comprising a single retroviral long terminal repeat (LTR), a polypurine tract, a packaging signal, a primer binding site and a rev responsive element.
2. The nucleic acid of claim 1, further comprising a central polypurine tract.
3. The nucleic acid of claim 1, further comprising a post-transcriptional regulatory element.
4. A vector comprising the nucleic acid of claim 1.
5. An isolated nucleic acid comprising a heterologous nucleotide sequence, a single retroviral long terminal repeat (LTR), a packaging signal, a rev responsive element, a polypurine tract, a eukaryotic promoter, a primer binding site, a bacterial origin of replication and a bacterial selection marker.
6. The nucleic acid of claim 5, further comprising a central polypurine tract.
7. The nucleic acid of claim 5, further comprising a post-transcriptional regulatory element.
8. A vector comprising the nucleic acid of claim 5.
9. The nucleic acid of claim 5, wherein a major portion of the U3 region of the LTR is deleted.
10. The nucleic acid of claim 9, wherein the portion of the U3 region that has been deleted is replaced with an inducible promoter.
11. The nucleic acid of claim 5, wherein the U3 region of the LTR comprises a *loxP* site.

12. The nucleic acid of claim 5, wherein the U3 region of the LTR comprises a restriction site.
13. An isolated nucleic acid comprising a 5' retroviral LTR and a 3' retroviral LTR, a heterologous nucleotide sequence, a packaging signal, a rev responsive element, a polypurine tract, a eukaryotic promoter, a primer binding site, a bacterial origin of replication and a bacterial selection marker, wherein the bacterial origin of replication and bacterial selection marker are located between the two LTRs.
14. The nucleic acid of claim 13, further comprising a central polypurine tract.
15. The nucleic acid of claim 13, further comprising a post-transcriptional regulatory element.
16. The nucleic acid of claim 13, wherein a major portion of the U3 region of the LTR is deleted.
17. The nucleic acid of claim 16, wherein the portion of the U3 region that has been deleted is replaced with an inducible promoter.
18. The nucleic acid of claim 13, wherein the U3 region of the 3' LTR comprises a *loxP* site.
19. The nucleic acid of claim 13, wherein the U3 region of the LTR comprises a restriction site.
20. A method of producing a single-LTR circular HIV-1 form plasmid, comprising
 - a. introducing the nucleic acid of claim 5 into a eukaryotic cell;
 - b. extracting non-integrated DNA from the eukaryotic cell;
 - c. transforming a bacterial cell with the DNA of step (b);

d. selecting a bacterial cell showing expression of a selection marker; and isolating a single-LTR circular HIV-form plasmid from the bacterial cell.

21. A method of making a retroviral vector particle, comprising:

- a) introducing the vector of claim 8 into a retroviral packaging cell in medium, said packaging cell comprising nucleotide sequences encoding rev, gag/pol and env proteins but lacking packaging sequences; and
- b) collecting retroviral vector particles from the medium.

22. A method of producing a retroviral expression vector, comprising cloning the nucleic acid of claim 1 into a non-retroviral expression vector.

23. A retroviral expression vector produced by the method of claim 21.

24. A method of isolating a cDNA sequence that encodes a gene product that results in a particular phenotype upon contact with a test substance, comprising:

- a. producing a cDNA library in a population of nucleic acids of Claim 11;
- b. introducing the nucleic acids of step (a) into eukaryotic cells;
- c. contacting the cells of step (b) with the test substance;
- d. introducing a nucleic acid encoding Cre protein into surviving cells of step (c) under conditions whereby the Cre protein nucleic acid is expressed;
- e. extracting circular DNA from the cells of step (d);
- f. transforming a bacterial cell with the circular DNA of step (e); and
- g. isolating from the bacterial cell the cDNA sequence that encodes a gene product that results in a particular phenotype upon contact with a test substance.

25. The method of Claim 24, wherein the cDNA library is produced by cloning an isolated nucleic acid comprising a single retroviral long terminal repeat (LTR),

a polypurine tract, a packaging signal, a primer binding site and a rev responsive element into a non-retroviral cDNA library.

26. The method of Claim 24, wherein the U3 region of the LTR comprises a restriction site.

27. A method of isolating a cDNA sequence that encodes a gene product that results in a particular phenotype upon contact with a test substance, comprising:

- a. producing a cDNA library in a population of nucleic acids of Claim 18;
- b. introducing the nucleic acids of step (a) into eukaryotic cells;
- c. contacting the cells of step (b) with the test substance;
- d. introducing a nucleic acid encoding Cre protein into surviving cells of step (c) under conditions whereby the Cre protein nucleic acid is expressed;
- e. extracting circular DNA from the cells of step (d);
- f. transforming a bacterial cell with the circular DNA of step (e);
and
- g. isolating from the bacterial cell the cDNA sequence that encodes a gene product that results in a particular phenotype upon contact with a test substance.

28. The method of Claim 27, wherein the cDNA library is produced by cloning an isolated nucleic acid comprising a single retroviral long terminal repeat (LTR), a polypurine tract, a packaging signal, a primer binding site and a rev responsive element into a non-retroviral cDNA library.

29. The method of Claim 27, wherein the U3 region of the LTR comprises a restriction site.